



Size:
5.66 x 2.79 x 1.48 inches
143.8 x 70.8 x 37.5 mm

Applications:

- Street Lighting
- Landscape Lighting
- Tunnel Lighting
- Household Lighting
- Indoor/Outdoor LED Lighting

FEATURES

- Isolation Class II
- RoHS Compliant
- Built-in Active PFC Function
- 100 Watts Maximum Output Power
- Free Air Convection
- MTBF > 100,000 Hours
- Up to 91.5% High Efficiency
- LED Power Applications
- Fully Isolated Plastic Case with IP67 Level
- 3-in-1 Dimming Function (1~10VDC & PWM Signal or Resistance)
- Universal Input Voltage: 90~305VAC (120~430VDC)
- Short Circuit, Over Voltage, Over Power, and Over Temperature Protection
- Output Voltage and Constant Current Level can be Adjusted through Internal Potentiometer

DESCRIPTION

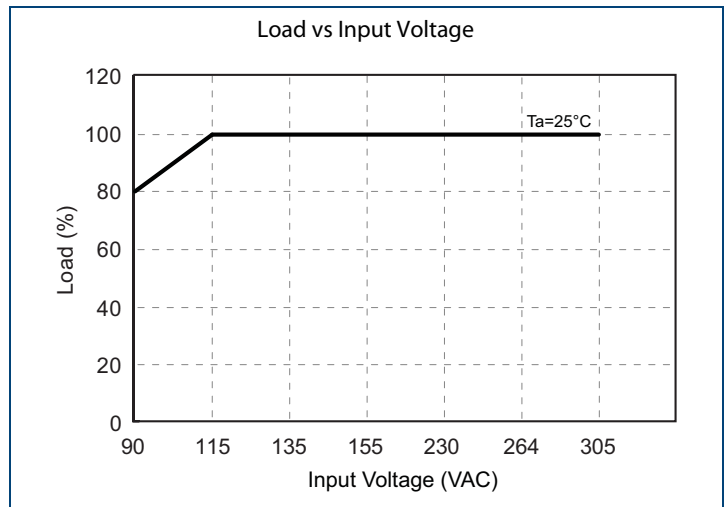
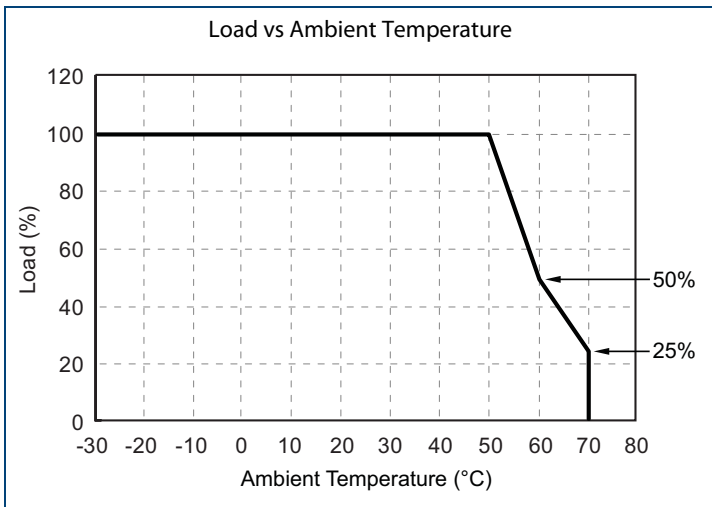
The PSAPF100 series of AC/DC LED switching power supplies provides a maximum power rating of 100W in a 5.66" x 2.79" x 1.48" fully isolated plastic case. These supplies meet IP67 waterproof standards, which makes them suitable for harsh environments in industrial or commercial outdoor lighting applications. The PSAPF100 series boasts the industry's widest input voltage range of 90-305VAC (120~430VDC) and has built-in active PFC, built-in dimming function, and high efficiency up to 91.5%. This series is RoHS compliant and has short circuit, over voltage, over power, and over temperature protection.

MODEL SELECTION TABLE

Model Number	Input Voltage	Output Voltage	Constant Current Range	Output Current (Convection)	Current Adj. Range	Ripple & Noise ⁽¹⁾	Maximum Capacitive Load	Maximum Output Power	Efficiency
PSAPF100-12S	90~305VAC (120~430VDC)	12 VDC	6~12 VDC	8.333A	0.833~8.333A	100mVp-p	100,000µF	100W	89%
PSAPF100-24S		24 VDC	12~24 VDC	4.166A	0.416~4.166A	100mVp-p	50,000µF	100W	91.5%
PSAPF100-36S		36 VDC	18~36 VDC	2.777A	0.277~2.777A	100mVp-p	8,000µF	100W	91.5%
PSAPF100-48S		48 VDC	24~48 VDC	2.083A	0.208~2.083A	200mVp-p	4,000µF	100W	91.5%
PSAPF100-54S		54 VDC	27~54 VDC	1.852A	0.185~1.852A	200mVp-p	3,000µF	100W	91.5%

NOTES
1. Ripple & Noise is measured at 20MHz bandwidth and with 0.1µF and 47µF capacitors in parallel.

DERATING CURVES



SPECIFICATIONS: PSAPF100 SERIES

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

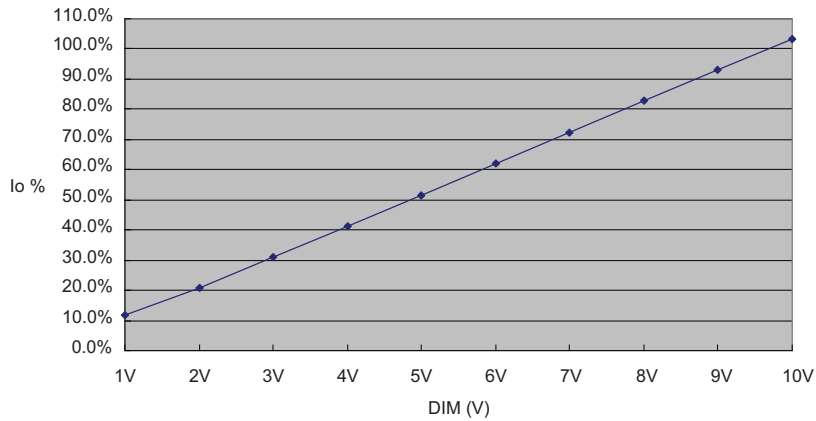
SPECIFICATION	TEST CONDITIONS	Min	Nom	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage Range	AC input voltage range	90		305	VAC
	DC input voltage range	120		430	VDC
Input Frequency		47		63	Hz
Input Current	115VAC and full load			1.5	A
	230VAC and full load			0.7	
	277VAC and full load			0.6	
Inrush Current (< 2ms)	115VAC			40	A
	230VAC			60	
Power Factor	115VAC and full load		0.97		
	230VAC and full load		0.9		
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Constant Current Range		See Table			
Voltage Accuracy		-2		+2	%
Current (Convection)		See Table			
Current Adjustment Range		See Table			
Line Regulation		-1		+1	%
Load Regulation		-1		+1	%
Minimum Load		1			%
Hold-Up Time		25			ms
Maximum Capacitive Load		See Table			
Output Power				100	W
Ripple & Noise	Measured at 20MHz bandwidth and with 0.1µF and 47µF capacitors in parallel	See Table			
Temperature Coefficient	0~50°C	-0.02		+0.02	%/°C
PROTECTION					
Over Voltage Protection		Automatic Recovery			
Over Power Protection		Automatic Recovery			
Over Temperature Protection		Automatic Recovery			
Short Circuit Protection		Automatic Recovery			
GENERAL SPECIFICATIONS					
Efficiency		See Table			
Switching Frequency		100		133	KHz
Withstand Voltage	Input to Output	3750			VAC
	Input to FG	1880			
	Output to FG	500			
Leakage Current				0.75	mA
Dimming Function		See page 3			
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	See derating curve	-30		+70	°C
Storage Temperature		-40		+85	°C
Humidity				95	% RH
Vibration		10~500Hz, 5G 10 min./1 cycle, 60 min. each along X,Y,Z axes			
Cooling		Free air convection			
MTBF	MIL-HDBK-217F (@ 25°C)	100,000			hours
PHYSICAL SPECIFICATIONS					
Weight		1.41 lbs (640g)			
Dimensions (L x W x H)		5.66 x 2.79 x 1.48 inches (143.8 x 70.8 x 37.5 mm)			
SAFETY & EMC					
Agency Approvals		UL60950, EN61347-1:2008, EN61347-2-13:2006			
EMI (Conduction & Radiation)		EN55015			
EMS (Noise Immunity)		EN61547			
Surge		2KV L-L, 4KV L-E			

DIMMING OPERATION

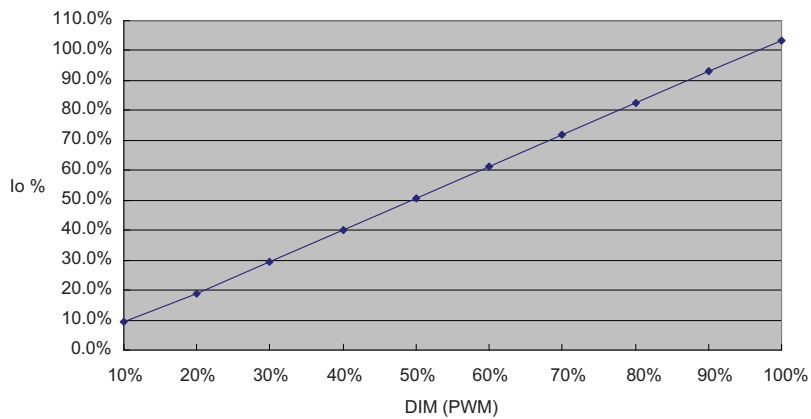
Built-in 3-in-1 dimming function, IP67 rated.

Output constant current level can be adjusted through output cable by connecting a 100KΩ VR or 1~10V or 10V PWM signal between +DIM and -DIM

I. 1~10V Dimming Function for Output Current Adjustment (typ.)

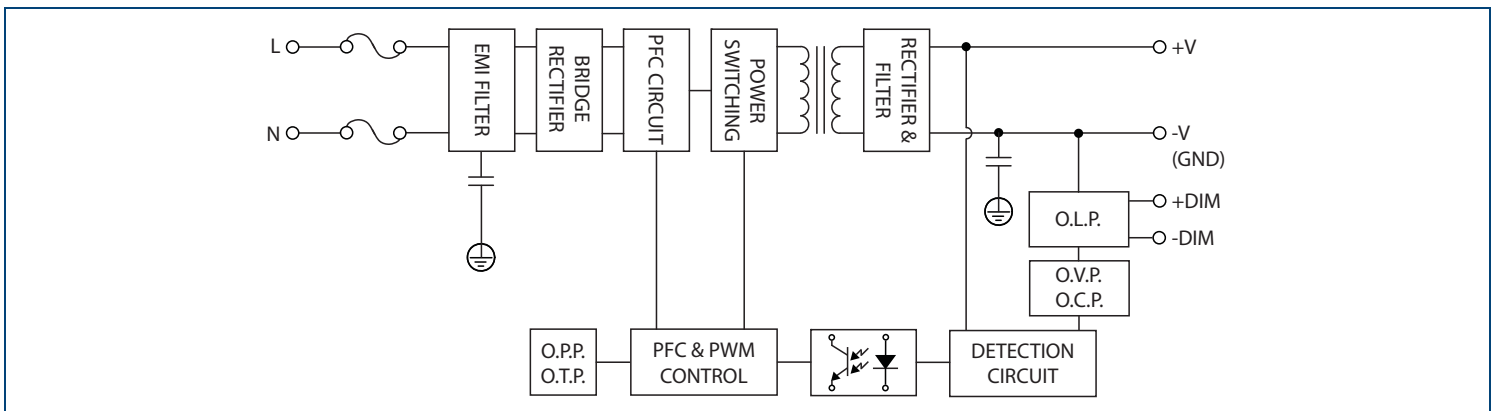


II. 10V PWM Signal for Output Current Adjustment (typ): frequency Range: 100Hz~3KHz

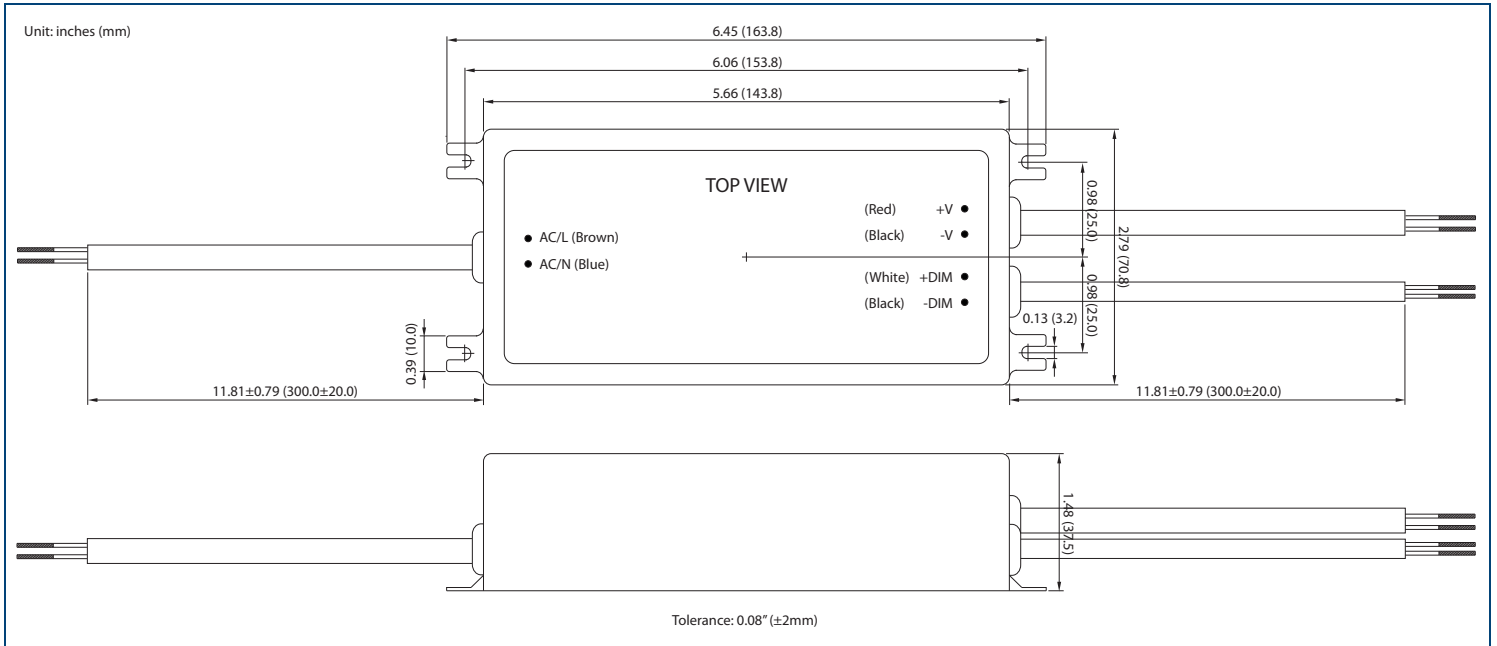


III. It can control 10~100% Output Current but must add 100KΩ VR in parallel

BLOCK DIAGRAM



MECHANICAL DRAWING



COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001-2008 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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